

What is claimed is:

1. Chromogenic glazing exhibiting safety impact characteristics, comprising:
5 first and second spaced transparent panels, at least one of which is of glass,
said first and second transparent panels each having a front surface and an opposing
rear surface, said rear surface of the first panel facing and spaced from front surface
of the said second panel defining a space between the said first and second panels,
said rear surface of said first panel and said front surface of said second panel
coated with a transparent conductor; and
10 a solid electrolyte medium disposed in said space which adheres to any of
said coated panels with an adherence which exceeds 1.8kg/linear cm width.
2. Chromogenic glazing according to claim 1 wherein said has a tensile strength
15 of at least 5kg/cm².
3. Chromogenic glazing according to claim 1 wherein said transparent
conductors is selected from the group consisting of Indium-tin oxide and fluorine-
doped tin oxide.
4. Chromogenic glazing according to claim 1 wherein said transparent
conductors is selected from the group consisting of indium-tin oxide and fluorine-
doped tin oxide.
5. Chromogenic glazing according to claim 1 wherein said panels include an
25 electrochromic layer selected from the group consisting of tungsten oxide,
molybdenum oxide, and mixed oxides containing tungsten and molybdenum.
6. Chromogenic glazing according to claim 1 wherein said panels include an
30 electrochromic layer selected from the group consisting of polyaniline and
polythiophene.

7. Chromogenic glazing according to claim 1 wherein said panels include an ion storage layer selected from the group consisting of iridium oxide, nickel oxide, manganese oxide and vanadium oxide, titanium vanadium oxide, titanium cerium oxide, niobium vanadium oxide, and mixtures of said oxides.

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8. Chromogenic glazing according to claim 1 wherein said panels are soda-lime glass and include at least one of an anti-iridescent coating and a coating to reduce sodium diffusion.

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9. Chromogenic glazing according to claim 1 where the contrast ratio of the electrochromic device is greater than 2:1

10. Chromogenic glazing according to claim 1 where the electrolyte conductivity at 25°C is greater than 10⁻⁶ S/cm.

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11. Chromogenic glazing according to claim 1 where the electrolyte exhibits a T_g lower than 0°C.

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12. Chromogenic glazing according to claim 1 where the haze of the said glazing is less than 5%.

13. Chromogenic glazing according to claim 1 claim 1 where the said glazing is UV stable.

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14. Chromogenic glazing as in claim 1 having an electrolytic film extruded film selected from the group consisting of poly-acrylates, polystyrenes, polyvinyl butyral, polyurethanes, poly vinyl acetates, poly vinyl chlorides and polycarbonates; a filler selected from the group consisting of polymer particles, pyrolytic silicas, aluminas, cerium oxides and zinc oxides; at least one dissociable salt selected from the group consisting of LiClO₄, LiCF₃SO₃, LiN(CF₃SO₂)₂, and NaCF₃SO₃; at least one

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~~solvent for dissociating said salt selected from the group consisting of propylene carbonate, ethylene carbonate, gamma-butyrolactone, and tetraglyme, sulfolane.~~

15. ~~Chromogenic glazing according to claim 14, said film being bonded in situ to the substrates of said glazing under heat and pressure.~~

16. ~~Chromogenic impact resistant safety glazing, comprising first and second spaced transparent panels, said first and second transparent panels each having a front surface and an opposing rear surface, said rear surface of the first panel facing and spaced from front surface of the said second panel defining a space between the said first and second panels, said rear surface of said panel and said front surface of said second panel coated with a transparent conductor wherein the said conductive side of at least one of the electrodes is further coated with additional layer where at least one of the said additional layer is reduced; and~~

15 ~~a solid electrolyte medium disposed in said space, where the adhesion of the said electrolyte to any of the said coated panels exceeds 1.8 kg/linear cm width.~~

17. ~~Chromogenic glazing according to claim 16 where the tensile elongation of the electrolyte to break is greater than 100%.~~

20 ~~18. An electrolyte for glazing assembly as in claim 16 which has a tensile strength of at least 5kg/cm².~~

25 ~~19. Chromogenic glazing according to claim 16 where the electrolyte conductivity at 25°C is greater than 10-6 S/cm.~~

20. ~~Chromogenic glazing according to claim 16 where the electrolyte T_g is lower than 0°C.~~

30 ~~21. Chromogenic glazing according to claim 16 where the haze of the electrolyte is less than 5%.~~

22. An electrochromic laminate formed by sandwiching an electrolytic layer between two transparent substrates, said laminate reducing sound transmission by at least 3dB.

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23. An electrochromic laminate as in claim 22 which is impact resistant.

24. An electrochromic laminate in claim 23 in which the substrates different in thickness.

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25. An electrochromic laminate made by placing sealing material around perimeter of an electrolyte sheet positioned on a first substrate, covering the sheet with a second substrate that extends over the sealing material, and subjecting both the electrolyte sheet and the sealing material to simultaneously applied heat and pressure.

15 26. An electrochromic laminate as in claim 25 which is impact resistant.

27. An electrochromic laminate as in 26 which reduces sound transmission at

20 least 3dB.